REMARKS

Claims 1-5 and 10-13 are presented for examination. Claims 6-9 were canceled by prior amendment. Claims 11-13 are newly added.

Information Disclosure Statements

Applicant respectfully requests that the Examiner provide initialed copies of the PTO form SB08 submitted with the information disclosure statement filed on September 27, 2011.

35 U.S.C. §§102 and 103

Claims 1, 2, 5, and 10 were rejected as being anticipated by U.S. Patent No. 3,847,507 (Sakiyama). Claims 3 and 4 were rejected as being unpatentable over Sakiyama in view of WIPO Publication No. WO 2005/042064 (Cook) as evidenced by U.S. Patent No. 6,609,883 (Woodard).

Independent claim 1 is reproduced below.

> 1. (Previously Presented) An apparatus for pumping fluid comprising:
> a housing having an exterior surface and an interior surface, the interior surface defining a cylindrical chamber having a first end wall and a second end wall, the second end wall having a plunger opening through which a plunger is reciprocal in the chamber to cause fluid to enter the chamber through a fluid inlet opening and to discharge fluid from the chamber through a fluid discharge opening,
> wherein the housing has an integrally formed cavity recessed into its exterior surface to provide a transducer surface which is radially spaced from the interior surface of the housing and which is disposed between said first and second end walls, and wherein a strain sensor is affixed to the transducer surface to measure deformation of the housing resulting from differences in fluid pressure within the chamber, the strain sensor producing a first signal indicative of the transducer surface assuming a first position when the chamber is at low pressure and producing a second signal indicative of the transducer surface assuming a second position when the chamber is at high pressure.

The applied art is not understood to describe or to suggest at least the underlined features of claim 1 above. Nor would it have been obvious to combine the teachings of the applied art to arrive at the applicants' invention.

In this regard, the Office Action apparently equated an exterior surface of Sakiyama's diaphragm 5 with the second end wall of applicant's claims.[1] However, according to applicant's claims, the first and second end walls are both features of the cylindrical chamber defined by the interior surface. Consequently, the exterior surface identified in the annotated figure at page 3 of the Office Action cannot be equated to either the first end wall or the second end wall of applicant's claims. Thus, the Office Action's illustrated interpretation of Sakiyama does not include "[an] interior surface defining … a first end wall and a second end wall."

Alternatively, if the liquid contacting portion 5a (on the interior surface of Sakiyama's diaphragm 5) is equated to the second end wall, Sakiyama still does not disclose or suggest all of the claim features. Assuming that the surface of the diaphragm 5 on which Sakiyama's strain gauge 23 is fitted (i.e., the surface opposite the liquid contacting portion 5a) could be considered a transducer surface, it is not disposed between the identified first end wall and the liquid contacting portion 5a. Accordingly, under this alternative construction Sakiyama does not disclose "a transducer surface ... disposed between said first and second end walls," as required by applicant's claims. Nor does Sakiyama indicate that such an arrangement would be in any way beneficial. Nor would a person of ordinary skill in the art have modified Sakiyama's system in a way to provide such an arrangement.

Nor it is clear how the surface of the diaphragm 5 on which the strain gauge 23 is fitted can be considered to be radially spaced from the interior surface of Sakiyama's cylinder 2. Sakiyama's FIG. 1 appears to show the surface axially, but not radially, spaced relative to the interior of the cylinder 2, and the text of Sakiyama's specficiation does not suggest otherwise. Accordingly, it seems that Sakiyama also fails to disclose or to suggest "a transducer surface which is radially spaced from the interior surface of the housing," as required by applicant's claims.

The remaining art has not been cited for teaching these missing features, nor would it have been obvious to combine the various teachings of the applied art in such a manner as to

[1] See annotated figure at page 3 of the Office Action dated October 14, 2011.

arrive at the applicant's invention. Accordingly, claim 1 is believed to be patentable. Claims 2-5 and 10 depend from claim 1, and, thus, are patentable for at least the same reasons.

Additionally, dependent claim 5 requires "[a] half cylindrical portion having a flat planar surface and a half cylindrical surface." The applied art is not understood to disclose or to suggest these features of claim 5.

The Office Action apparently equated Sakiyama's diaphragm 5 with the half cylindrical portion, and equated an exterior surface of the diaphragm with the flat planar surface.[2] However, the Office has not identified, nor has applicant found, any feature on the diaphragm 5 that could reasonably be considered a half cylindrical surface. Accordingly, this rejection of claim 5 should be withdrawn.

Furthermore, with regard to the rejection of the independent claim 1 the Office Action equated the outer surface of Sakiyama's diaphragm 5 with the second end wall of the cylindrical chamber of applicant's claims; however, for the rejection of dependent claim 5 the Office Action equated the outer surface of Sakiyama's diaphragm 5 with the flat planar surface. The rejection of dependent claim 5 does not articulate which features of Sakiyama are equated with the features required by applicant's independent claim 1. Thus, for the features of the independent claim, which are incorporated into dependent claim 5 by virtue of its dependency, applicant assumes that the Office applied the same interpretation of Sakiyama as applied in the rejection of claim 1.

Even assuming, without conceding, that the outer surface of the Sakiyama's diaphragm 5 could be equated with either the second end wall or the flat planar surface of the housing, it cannot be equated to both of these distinct claim features. Applicant further submits that a change in the interpretation of the reference partway through a rejection, which appears to be the case in the rejection of claim 5, is improper and cannot be relied upon to support a claim rejection. In view of the foregoing applicant respectfully requests reconsideration and withdrawal of the rejection of claim 5.

---

[2] See annotated figure at page 4 of the Office Action.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

In view of the foregoing remarks, applicant respectfully submits that the application is in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.

Please charge any additional fees, not already covered by check, or credit any overpayment, to deposit account 230503, referencing Attorney Docket No. W-392-US.

Respectfully submitted,

Date: December 5, 2011

/Timothy M. Bryan/
Timothy M. Bryan
Reg. No. 62,791

Waters Technologies Corporation
34 Maple Street
Milford, MA 01757
Telephone: (508) 482-3231
Facsimile: (508) 482-2320